

## **15A NCAC 02D .0925 PETROLEUM LIQUID STORAGE IN FIXED ROOF TANKS**

(a) For the purpose of this Rule, the following definitions apply:

- (1) "Condensate" means hydrocarbon liquid separated from natural gas that condenses due to changes in the temperature or pressure and remains liquid at standard conditions.
- (2) "Crude oil" means a naturally occurring mixture that consists of hydrocarbons or sulfur, nitrogen or oxygen derivatives of hydrocarbons or mixtures thereof that is a liquid at standard conditions.
- (3) "Custody transfer" means the transfer of produced crude oil or condensate, after processing or treating in the producing operations, from storage tanks or automatic transfer facilities to pipeline or any other forms of transportation.
- (4) "External floating roof" means a storage vessel cover in an open top tank consisting of a double deck or pontoon single deck that rests upon and is supported by the petroleum liquid being contained and is equipped with a closure seal or seals to close the space between the roof edge and tank shell.
- (5) "Internal floating roof" means a cover or roof in a fixed roof tank that rests upon or is floated upon the petroleum liquid being contained, and is equipped with a closure seal or seals to close the space between the roof edge and tank shell.
- (6) "Petroleum liquids" means crude oil, condensate, and any finished or intermediate products manufactured or extracted in a petroleum refinery.
- (7) "Petroleum refinery" means any facility engaged in producing gasoline, kerosene, distillate fuel oils, residual fuel oils, lubricants, or other products through distillation of crude oils, or through redistillation, cracking, extraction, or reforming of unfinished petroleum derivatives.

(b) This Rule applies to all fixed roof storage vessels with capacities greater than 39,000 gallons containing volatile petroleum liquids whose true vapor pressure is greater than 1.52 pounds per square inch.

(c) This Rule does not apply to volatile petroleum liquid storage vessels:

- (1) equipped with external floating roofs; or
- (2) having capacities less than 416,000 gallons used to store produced crude oil and condensate prior to lease custody transfer.

(d) With the exceptions stated in Paragraph (c) of this Rule, the owner or operator of any fixed roof storage vessel subject to this Rule shall not use the storage vessel unless:

- (1) The storage vessel has been retrofitted with an internal floating roof equipped with a closure seal, or seals, to close the space between the roof edge and tank wall;
- (2) The storage vessel is maintained such that there are no visible holes, tears, or other openings in the seal or any seal fabric or materials;
- (3) All openings except stub drains are equipped with covers, lids, or seals such that:
  - (A) the cover, lid, or seal is in the closed position at all times except when in actual use;
  - (B) automatic bleeder vents are closed at all times except when the roof is floated off or landed on the roof leg supports; and
  - (C) rim vents, if provided, are set to open when the roof is being floated off the roof leg supports or at the manufacturer's recommended setting;
- (4) Planned routine visual inspections are conducted through roof hatches once per month;
- (5) A complete inspection of cover and seal is conducted whenever the tank is emptied for maintenance, shell inspection, cleaning, or for other nonoperational reasons or whenever excessive vapor leakage is observed; and
- (6) Records are maintained in accordance with 15A NCAC 02D .0903 and shall include:
  - (A) reports of the results of inspections conducted pursuant to Subparagraphs (d)(4) and (d)(5) of this Rule;
  - (B) a record of the average monthly storage temperature, and true vapor pressures of petroleum liquids stored; and
  - (C) records of the throughput quantities and types of petroleum liquids for each storage vessel.

*History Note: Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5);  
Eff. July 1, 1979;  
Amended Eff. March 1, 1991; December 1, 1989; January 1, 1985;  
Readopted Eff. November 1, 2020.*